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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,249	02/17/2004	Dieter Storz	PD 030025	9663

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EXAMINER

GIESY, ADAM

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/780,249

Applicant(s)

STORZ, DIETER

Examiner

Adam R. Giesy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-8,11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 2-5,9,10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-4 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "reduced" in claim 2 is a relative term which renders the claim indefinite. The term "reduced" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Examiner notes that the claim recites that the step width is reduced, however the claim does not recite the amount or increment that the step width is reduced.

Claim 4 is rendered indefinite since the claim does not clearly recite any limiting criteria of the step width of the follow up signal. Examiner asserts that a linear or nonlinear rising or falling signal/trend is still a non-limited signal/trend, therefore making the recited limitations in claim 4 indefinite.

The term "large" in claim 9 is a relative term which renders the claim indefinite. The term "large" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Examiner notes that the claim

recites that large follow-up signal values, however neither the claim nor the specification disclose what magnitude of follow-up signal value is considered "large."

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6-8, 11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamioka et al. (hereinafter Kamioka – US Pat. No. 5,671,209).

Regarding claim 1, Kamioka discloses method for compensating scanning disturbances on optical recording media such as occur in a control loop of a playback or recording unit, in particular as settling amplitude (ESA1) after a disk disturbance (ST) (see column 14, lines 4-21 – note that the "Unusable Area" reads as the defective area or disc disturbance), wherein a follow-up signal (A2) counteracting the settling amplitude (ESA1) is coupled into the control loop as additional offset as a function of the frequency of the occurrence of a disk disturbance (ST) for a prescribed time interval for the purpose of compensating scanning disturbances (see column 14, lines 22-34 – the hold signal is inputted into the TE and FE signals with a frequency indicative of the frequency of the disturbance).

Regarding claim 6, Kamioka discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the prescribed time interval for which the follow-up signal (A2) counteracting the settling amplitude (ESA1) is coupled

into the control loop corresponds to the duration of one revolution of the optical recording medium (see column 14, lines 22-34 – affects the TE and FE signals when the HOLD level fluctuated between the H and L levels so as not to cause a major variance when the data section begins. Since a disruption or disc defect would be larger than a track, it is also inherently suggested that a defect will occur at the same point on the optical disc and therefore the counteracting HOLD signal will last for one rotation of that disc).

Regarding claim 7, Kamioka discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the prescribed time interval for which the follow-up signal (A2) counteracting the settling amplitude (ESA1) is coupled into the control loop corresponds at least to the length of duration of the disk disturbance (ST) or the time interval for which the settling amplitude (ESA1) exceeds a prescribed threshold value (see column 14, lines 22-34 – affects the TE and FE signals when the HOLD level fluctuated between the H and L levels so as not to cause a major variance when the data section begins. Since a disruption or disc defect would be larger than a track, it is also inherently suggested that a defect will occur at the same point on the optical disc and therefore the counteracting HOLD signal will last for one rotation of that disc).

Regarding claim 8, Kamioka discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the follow-up signal (A2) is inserted into the control loop after the disk disturbance (ST), as early as during the disk

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disturbance (ST) and in a fashion transgressing the disk disturbance (ST) (see column 14, lines 4-21).

Regarding claim 11, Kamioka discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the follow-up signal (A2) has an amplitude and direction that leads the scanning beam (L) of the optical recording medium in the forward direction of a data track to be scanned after the disk disturbance (ST) (see column 14, lines 23-34 – the signal must inherently be in the forward direction as the disc will still be rotating in that direction and the optical pickup will still be attempting to read the data).

Regarding claim 13, Kamioka discloses an arrangement for compensating scanning disturbances on optical recording media such as occur in a control loop of a playback or recording unit, in particular as settling amplitude (ESA1) after a disk disturbance (ST), wherein a control unit (uC) is provided that, for the purpose of evaluating the settling amplitude (ESA1) of the control loop after a disk disturbance (ST) (see column 4, lines 9-23 – note that the controller is not pictured), is connected via an input (E1) to a connection providing an error signal (FE, TE) of the control loop, and is connected to a summation point (S1 or S2) of the control loop that is provided for feeding in a follow-up signal (A2) that counteracts the settling amplitude (ESA1) and is coupled into the control loop as additional offset as a function of the frequency of the occurrence of a disk disturbance (ST) for a prescribed time interval in order to compensate scanning disturbances in the control loop (the focus servo controller must

inherently be connected to the FE signal as well as the counteracting signal in order to maintain control of the counteracting signal as stated in column 14, lines 4-21).

Regarding claim 14, Kamioka discloses all of the limitations of claim 1 as discussed in the claim 13 rejection above and further that the connection providing the error signal (FE, TE) of the control loop is the input of the control amplifier (RV) of the control loop (see Figure 5, elements 15a and 16a), and the summation point (S1 or S2) of the control loop is an adder in the connecting lead of an amplifier (PRE) for providing the error signal (FE, TE) in the control loop (elements 17 and 18).

Regarding claim 15, Kamioka discloses a playback or recording unit for compensating scanning disturbances on optical recording media such as occur in a control loop of a playback or recording unit, in particular as settling amplitude (ESA1) after a disk disturbance (ST), wherein claim 1 is used in the playback or recording unit (see Figure 2).

Allowable Subject Matter

3. Claims 5, 10, and 12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 is allowable since none of the prior art of record, alone or in combination, disclose or suggest all of the limitations of claim 1 as well as the further limitation that the step width (X) of the follow-up signal (A2) has a value of approximately 10 percent of the amplitude of the settling amplitude (ESA1).

Claim 10 is allowable since none of the prior art of record, alone or in combination, disclose or suggest all of the limitations of claim 1 as well as the further limitation that in the event of a plurality of disk disturbances (ST) during one revolution of the optical recording medium only the settling behavior occurring with the greatest settling amplitude (ESA1) is evaluated and used to form the follow-up signal (A2).

Claim 12 is allowable since none of the prior art of record, alone or in combination, disclose or suggest all of the limitations of claim 1 as well as the further limitation that in the method is used for follow-up control of balance trimming.

4. Claims 2-4 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 2 is allowable since none of the prior art of record, alone or in combination, disclose or suggest all of the limitations of claim 1 as well as the further limitation that in the case of a settling amplitude (ESA1) that occurs anew in the same direction after approximately one revolution of the optical recording medium, the follow-up signal (A2) is increased by at least one step width (X), and is reduced in the case of a change in direction of the settling amplitude (ESA1).

Claims 3 and 4 are allowable as being dependent upon aforementioned claim 2.

Claim 9 is allowable since none of the prior art of record, alone or in combination, disclose or suggest all of the limitations of claim 1 as well as the further limitation that the follow-up signal (A2) is produced in stepwise fashion for large follow-up signal

values (A2) in the event of absence of the disk disturbance (ST) after at least one revolution (U).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

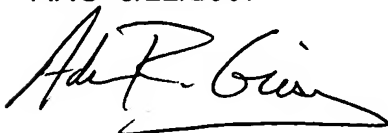
a. Watanabe et al. (US Pat. No. 6,628,576 B1) discloses an optical storage medium that has a track jumping controller for limiting overshoot in a track jumping operation.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 3/22/2007




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